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| 10/662,508 | 09/16/2003 | Toru Takayama | 12732-166001 | 1342 |
| 26171 | 7590 | 06/27/2005 | EXAMINER | |
| FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022 | | | LE, THAO X | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2814 | |

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,508

Applicant(s)

TAKAYAMA ET AL.

Examiner

Thao X. Le

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 12-15 and 17-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 12-15 and 17-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-6, 12-15 and 17-28 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of copending Application No. Application No. 10/662357 in view of US PUB 2004/0187917 to Pichler.

This is a provisional obviousness-type double patenting rejection.

In claims 1-22, Yamazaki (6589) claims a light emitting apparatus comprising a TFT electrically connects to the first electrode, a luminescent layer formed over the first electrode, a second electrode formed over the luminescent layer, an inorganic layer (silicon oxide, silicon nitride) formed over the second electrode, and a fluoroplastics formed over the inorganic layer.

But, Yamazaki (6589) does not disclose a fluoroplastics formed over a second electrode and an inorganic layer (silicon oxide, silicon nitride) formed over the fluoroplastics layer.

However, Pichler discloses a liquid crystal display in fig. 5 comprising a luminescent layer 501 [0070], [0071], and [0101] formed over the first electrode 508, a second electrode 502 formed over the luminescent layer 501, a fluoroplastics 512 [0108] formed over the second electrode 502, an inorganic layer (silicon oxide, silicon nitride) [0108] formed on the fluoroplastics. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to use the inorganic layer formed on the fluoroplastics teaching of Pichler with Yamazaki's device, because it would have protected against exposure to water or air as taught by Pichler [0108].

With respect to claims 23-28, it would have been obvious to one of ordinary skill in the art to use the teaching of Pichler and Yamazaki as claim for intended used, MPEP 2144.07.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by US Pub. 20040187917 to Pichler.

Regarding claim 1, Pichler discloses a light-emitting apparatus having a light-emitting device in fig. 5 comprising: a first electrode 508; a second electrode 502 [0098]; an electroluminescent film 501 [[0070], [0071] and [[0101] disposed between the first electrode 508 and the second electrode 502; a film 512 containing fluoroplastics [0108] formed over the second electrode 502; and an inorganic insulating film (silicon oxide, silicon nitride) [0108] formed on the film 512 containing fluoroplastics (multi-layer stack of organic materials with inorganic material).

Regarding claim 5, Pichler discloses the light emitting apparatus wherein the film containing fluoroplastics is one type of polymer selected from polytetrafluoroethylene [0108].

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 2, 12, 24, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6583440 to Yasukawa in view of US Pub. 20040187917 to Pichler.

Regarding claims 2, 12, Yasukawa discloses a light emitting apparatus having a light emitting device in fig. 8 comprising: substrate 10A, column 31 line 57, a TFT 30, column 31 line 61, over the substrate 10A, an insulating film 4, column 35 line 36, over the TFT, a first electrode 9a, column 32 line 7, over the insulating film 4 and electrically connected to the TFT 30, fig. 8, a second electrode 21, column 32 line 57, an electroluminescent film 50, column 31 line 61, disposed between the first electrode 9a and the second electrode 21, a polymer film 22, column 32 line 60, over the second electrode 21, and an inorganic insulating film 20A, column 31 line 64, formed on the polymer film 22.

But Yasukawa does not disclose the light emitting apparatus wherein the polymer film 22 containing fluoroplastics.

However, Pichler discloses a light emitting apparatus in fig. 5 comprising: a first electrode 508; a second electrode 502 [0098]; an electroluminescent film 501 [0070], [0071] and [0101] disposed between the first electrode 508 and the second electrode 502; a film 512 containing fluoroplastics [0108] formed over the second electrode 502; and an inorganic insulating film (silicon oxide, silicon nitride) [0108] formed on the film 512 containing fluoroplastics. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to use the fluoroplastics and inorganic insulating film teaching of Pichler with Yasukawa's device, because it would have improved weather resistance, mechanical strength and protected against exposure to water and air as taught by Pichler [0098] and [0108].

Regarding claim 24, Yasukawa discloses the light emitting apparatus is selected from the group consisting of digital camera, laptop computer, mobile computer, portable image reproducing device, goggle type display, video camera and cellular phone, column 13 lines 25-35.

Regarding claim 30, Yasukawa and Pichler does not disclose a light-emitting apparatus wherein the film containing fluoroplastics has irregularities.

However, it would have been obvious that the junction of layer 510 or 512 with other material as disclosed by Pichler would comprise irregularities because of different materials interface.

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8. Claims 3-4, 6, 13-15, 17-22, 25-28, 31-32, 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6583440 to Yasukawa in view of US Pub. 20040187917 to Pichler and US 664207 to Seo et al.

Regarding claims 3-4, 13-14, 17-21, Yasukawa discloses a light-emitting apparatus in fig. 8, having a light-emitting device comprising: a substrate 10A, a TFT 30 over the substrate, an insulating film 4 over the TFT 30; a first electrode 9a over the insulating film 4 and electrically connected to the TFT 30, a second electrode 21, an electroluminescent film 50 disposed between the first electrode 9a and the second electrode 21, a polymer film 22 formed over the second electrode 21, and an inorganic insulating 20A formed on the polymer film 22, wherein the inter insulating 4 comprises a first inter insulating film 4 and a second inter insulating 7 formed on the first insulating film 4 selecting from the group consisting of NSG, PSG, BPSG, silicon oxide or silicon nitride, column 32 line 32-40.

But Yasukawa does not disclose the light emitting apparatus wherein the polymer film 22 containing fluoroplastics and wherein the first insulating film comprises a material selected from the group consisting of acrylic, polyamide, and polyimide; and the second insulating film containing fluoroplastics.

However, Pichler discloses a light emitting apparatus in fig. 5 comprising: a first electrode 508; a second electrode 502 [0098]; an electroluminescent film 501' [[0070], [0071] and [[0101] disposed between the first electrode 508 and the second electrode 502; a film 510/512 containing fluoroplastics [0108] formed over the second electrode 502; and an inorganic insulating film (silicon oxide,

silicon nitride) [0108] formed on the film 510/512 containing fluoroplastics (Teflon). At the time the invention was made; it would have been obvious to one of ordinary skill in the art to use the fluoroplastics and inorganic insulating film teaching of Pichler with Yasukawa's device, because it would have improved weather resistance, mechanical strength and protected against exposure to water and air as taught by Pichler [0098] and [0108].

With respect to wherein the first insulating film comprises a material selected from the group consisting of acrylic, polyamide, and polyimide, and the second insulating film containing fluoroplastics, Seo discloses the interlayer dielectric layer 60 consisting of silicon oxide, polyimide, or Teflon (fluoroplastics), column 3 lines 42-50. At the time of the invention was made; it would have been obvious to one of ordinary skill in the art to use interlayer dielectric teaching of Seo to replace the interlayer insulating film of Yasukawa as claimed, because such material replacement would have been considered a mere substitution of art-recognized equivalent values, MPEP 2144.06.

Regarding claims 6, 15, 21-22, Yasukawa does not disclose the light emitting apparatus wherein the second insulating film is a mixed film comprising fluoroplastics and metallic oxides, and a ratio of the metallic oxides in the mixed film monotonically increases from a portion of the mixed film distant from the first electrode to a portion of the mixed film close to the first electrode.

However, at the time the invention was made; it would have been obvious to one of ordinary skill in the art to understand the second insulating film 7 is a

mixed film comprising polymer plastics and metallic oxides, and a ratio of the metallic oxides in the mixed film monotonically increases from a portion of the mixed film distant from the first electrode to a portion of the mixed film close to the first electrode, because the mixture of metallic oxide and interlayer insulating film would have been resulted from the interaction between the electrode and the interlayer insulating film.

Regarding claims 25-28, Yasukawa discloses the light emitting apparatus is selected from the group consisting of digital camera, laptop computer, mobile computer, portable image reproducing device, goggle type display, video camera and cellular phone, column 13 lines 25-35.

Regarding claims 31-32, 34-35, Yasukawa and Pichler do not disclose a light-emitting apparatus according to Claim 1, wherein the film containing fluoroplastics has irregularities.

However, it would have been obvious that the junction of layer 510 or 512 with other material as discloses by Pichler would comprise irregularities because of different materials interface.

9. Claims 23, 29, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pub. 20040187917 to Pichler.

Regarding claim 23, Pichler does not discloses the light emitting apparatus is selected from the group consisting of digital camera, laptop computer, mobile computer, portable image reproducing device, goggle type display, video camera and cellular phone.

But Pichler discloses the light emitting apparatus including LED, laser, solar cell or radiation absorbing devices [0049] and [0050]. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to use the teaching of Pichler as claim for intended used, MPEP 2144.07.

Regarding claims 29, 33, Pichler does not disclose a light-emitting apparatus according to Claim 1, wherein the film containing fluoroplastics has irregularities.

However, it would have been obvious that the junction of layer 510 or 512 with other material would comprise irregularities because of different materials interface.

Response to Arguments

10. Applicant's arguments filed 05/16/05 have been fully considered but they are not persuasive.

a. The Applicant argues that Pichler does not disclose additional layers on the fluorine resin. This is not persuasive because Pichler discloses layer 510 and 512 comprises fluoroplastics or inorganic as encapsulant that can be a multi-layer stack of organic material with inorganic. Such stack layer would read on the claim limitation.

b. The Applicant argues that Pichler's discussion of the use of fluorine resin as a surface protecting layer would not have motivated one of ordinary skill in the art to modify Yasukawa's device to make the alignment film 22. This is not persuasive because the alignment is just one of the function of film 22. The

additional function of film 22 may include insulation or barrier. Thus, it would have been obvious and proper to replace the film 22 of Yasukawa with fluoroplastics of Pichler as discussed in the Office action dated 02/15/2005. Furthermore, the Applicant has not presented a convincing argument such that the replacement would not work or function correctly in Yasukawa's device.

c. The Applicant argues that film 20A is not formed on the film 22. It is apparent that the Applicant's interpretation of the word 'ON' means 'in contact with'. The Examiner submits that the word 'ON' has multiple meanings including 'to indicated position in close proximity with'. Thus, it would read on the claim language. It is noted that the features upon which applicant relies on are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

d. With respect to 'inter-dielectric layer vs. fluoroplastics', the Applicant argues that the reference must provide some motivation to do such material substitution. Substitution of equivalents requires no express motivation as long as the prior art recognizes the equivalency. *In re Fount* 213 USPQ 532 (CCPA 1982); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *Graver Tank & Mfg. Co. Inc. v. Linde Air Products Co.* 85 USPQ 328 (USSC 1950).

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao X. Le whose telephone number is (571) 272-1708. The examiner can normally be reached on M-F from 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy can be reached on (571) 272 -1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


LONG PHAM
PRIMARY EXAMINER

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thao X. Le
17 June 2005